

REMARKS

The non-final Office Action dated March 23, 2004 ("Office Action") rejected all the pending claims of the instant application. Independent Claim 16 and dependent Claim 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Spies et al., U.S. Patent No. 5,689,565. In addition, independent Claim 1 and dependent Claims 2-7 and 12-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shrader et al., U.S. Patent No. 6,374,359, in view of Quimby, U.S. Patent No. 5,367,573, and further in view of Hardy et al., U.S. Patent No. 5,623,546. Additionally, Claims 8-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shrader et al., as modified by Quimby and Hardy et al., and further in view of Becker et al., U.S. Patent No. 6,557,038. This Amendment sets forth arguments as to why applicant believes that the Office's position with respect to the pending claims is incorrect and should be withdrawn.

In addition to the claim rejections, the specification stands objected to. In response to the specification objection, various small corrections have been made to the disclosure of the instant application. In addition, the Applicant has also revised the Abstract of the Disclosure in order to conform it to the requirements of the Office.

In order to assist the Office in further understanding the exemplary embodiments of the present invention, the Applicant provides below a summary of the invention, which relates to the various exemplary embodiments of the present invention. It is to be understood that the following summary of the various exemplary embodiments is not provided to define the scope or interpretation of any of the claims of this application. Instead, the summary is provided to help the Office better appreciate claim distinctions discussed hereinafter.

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Summary of the Invention

Generally, an exemplary embodiment of the present invention relates to a method and apparatus for encoding and storing storage data that minimizes the amount of data transferred between a client computer and a server computer, while at the same time maximizing the amount of configuration information transferred. An exemplary embodiment of the present invention makes use of encoding and storing session data in an encoded and encrypted session cookie in order to maximize the amount of configuration information transferred. In particular, an exemplary embodiment of the present invention provides a server computer that encodes session data into a session cookie in a tag-length-value format.

The tag-length-value format encodes data by providing a tag identifying the semantic information that a value represents, the length of the value, and then the value itself. Once the data has been encoded in the tag-length-value format, the server computer encrypts the encoded session data using the modified encryption key. The modified encryption key may be formatted by inserting a secret, such as the user's password or e-mail address, into a standard encryption key at a predefined location. The session cookie is then formed by concatenating the length of a length of the secret, the length of the secret, the secret itself, and the encoded and encrypted session data. The session cookie is then transmitted from the server computer to a client computer, where it is stored.

Specification Objection

Applicant has amended the disclosure along with the Abstract of the Disclosure in response to the Office's specification objection. In view of these minor corrections by the Applicant, it is respectfully submitted that the specification objection has been obviated.

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Accordingly, the Office is respectfully requested to reconsider and withdraw the specification objection.

Claim Rejection Under 35 U.S.C. § 102(b)

Claims 16 and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Spies et al. For the reasons discussed below, Applicant respectfully submits that the relied upon patent document fails to teach or suggest the recitation of independent Claim 16. Moreover, applicant respectfully submits that the relied upon document is similarly deficient with respect to the rejected dependent claim. Additionally, applicant respectfully submits that the dependent claim is allowable at least due to its dependence upon an allowable independent claim.

Rejection of Independent Claim 16

Independent Claim 16 sets forth a combination of limitations including "a first data field containing data representing a data length identifier and a tag type." (Emphasis added.) For the following reasons, the patent relied upon by the Office, whether taken alone or in combination, fails to teach or suggest at least this indicated limitation of independent Claim 16.

Spies et al. teach a cryptography system and method for providing cryptographic services for a computer application. According to Spies et al., and as illustrated in Figure 9 of the patent, a communication data structure may include a data structure 140 used to carry a package that is exchanged between participants, or between a participant and a trusted authority. (See Col. 15, lines 62-65.) The tag-length-value (TLV) data structure 140 consists of three parts: an identifier field 142 (which is also known as the "tag"), a length field 144, and a value field 146. (Emphasis added.) (See Col. 16, lines 4-6.)

According to the patent, the identifier field or tag 142 is a fixed-sized field that defines or identifies the commensurate data contained in the package. The length field 144 is a variable-

sized field that contains the length of the commensurate data contained in the package. Finally, the length field is preferably an exact byte count of the data contained in the value field 146. As is disclosed by the patent, the three specific fields 142, 144 and 146 are those that are included in the data structure 140. Moreover, the patent document indicates that *only* these fields 142, 144, and 146 make up the data structure 140. In particular, Spies et al. indicates that the "data structure 140 consists" of the three indicated fields. (See Col. 16, line 4.)

As is understood by the discussed portion of the Spies et al. patent, the data structure 140 does not include a field that contains data representing "a data length identifier and a tag type." The identifier field 142 of the data structure 140 relates to the commensurate data contained in the package. This commensurate data does not relate to data that is designed to identify "a tag type." Moreover, the various fields 142, 144, and 146 of the data structure 140 are not individually capable of containing data that identifies two distinct data types. However, distinctive to the Spies et al. patent, the first data field set forth in independent Claim 16 includes "data representing the data length identifier and a tag type."

With regard to rejection of dependent Claim 17, applicant respectfully submits that this claim is allowable at least due to its dependence upon an allowable independent claim. Moreover, applicant respectfully submits that this claim sets forth recitation that further defines the present invention over the patent document relied upon by the Examiner.

In view of the above comments, Applicant respectfully requests reconsideration and withdrawal of the claim rejection under 35 U.S.C. § 102(b).

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-7 and 12-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shrader et al., U.S. Patent No. 6,374,359, in view of Quimby, U.S. Patent No. 5,367,573, and

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further in view of Hardy et al., U.S. Patent No. 5,623,546. Additionally, Claims 8-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shrader et al. as modified by Quimby and Hardy et al., and further in view of Becker et al., U.S. Patent No. 6,557,038. For the following reasons, applicant respectfully submits that these documents, whether standing alone or in combination, fail to teach or suggest the recitation of independent Claim 1. Moreover, applicant respectfully submits that these documents are similarly deficient with respect to the dependent claims of the instant application. In addition, applicant respectfully submits that the dependent claims are allowable at least due to the dependence upon an allowable independent claim.

Independent Claim 1 sets forth a combination of limitations including "concatenating a secret, a length of the secret, and a length of the secret with said encrypted coded configuration data to form a session cookie." For the following reasons, the documents relied upon by the office, whether taken alone or in combination, fail to teach or suggest at least this indicated limitation of independent Claim 1.

Shrader et al. teaches the dynamic use and validation of HTTP cookies for authentication. According to Shrader et al., a cookie value routine 42 is initiated when a server-driven graphical user interface verifies a username and a password sent to thereto from a login panel of a user's web browser. The cookie value routine 42 constructs a cookie value that includes a username, password, and IP address. (See Col. 7, lines 16-21.)

As is stated in the Office Action, it is readily appreciated that the disclosure of Shrader et al. fails to teach or suggest at least "concatenating a secret, a length of the secret, and a length of the length of the secret with said encrypted coded configuration data to form a session cookie." (Emphasis added.) Instead of relying upon the reference to make up for the indicated deficiency, the Office Action merely states that "[t]he act of supplying the length of the length of

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a field only adds more validation, therefore the extra validation fields are obvious." The Applicant respectfully disputes that this is insufficient reasoning to substantiate a rejection under 35 U.S.C. § 103(a).

The Office is respectfully reminded that in order to set forth a proper rejection under 35 U.S.C. § 103(a), each and every element taught by the claim being rejected must be taught by the reference, or the combination of references, being relied upon. If a combination of references is used, then the Office must supply reasonable motivation for combining the references. This motivation must come from the references themselves, or may also be provided based on the expertise of those having ordinary skill in the art. Applicant respectfully submits that the above-indicated conclusionary statement by the Office does not satisfy the rigorous standards required for substantiating a rejection under 35 U.S.C. § 103(a).

Because the additional patent documents have not been relied upon in the Office Action to make up for the indicated deficiencies of Shrader et al., the specifics of these documents have not been discussed herein. However, from even a cursory review of the additional patent documents relied upon, it is clear that the disclosures therein do not make up for the deficiencies discussed in relation to Shrader et al.

Therefore, because Shrader et al. fail to teach or suggest at least "concatenating a secret, a length of the secret, and a length of the length of the secret with said encrypted coded configuration data to form a session cookie," and the supplemental documents relied upon do not make up for this deficiency of Shrader et al., a proper rejection under 35 U.S.C. § 103(a) has not been presented by the Office. Moreover, even assuming *arguendo* that all the elements are taught by the combination of references relied upon by the Office, the rejection under 35 U.S.C. § 103(a) is deficient, as the stringent requirements for establishing obviousness under the Statute have not been met.

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In accordance with the above, applicant respectfully requests reconsideration and withdrawal of the rejection of independent Claim 1, and those claims that are dependent thereon.

In view of the above comments, reconsideration and withdrawal of each of the claim rejections is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the present application is now in condition for allowance. Reconsideration and reexamination of this application, as amended, allowance of the rejected claims, and passage of the application to issue at an early date are respectfully solicited. If the Examiner has any questions or comments concerning this application, the Examiner is invited to contact the undersigned at the number below.

Respectfully submitted,

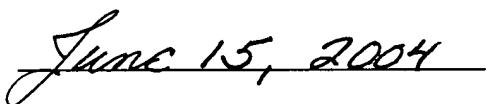
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Abstract of the Disclosure

Session data is encoded in a tag-length-value format and encrypted using a modified encryption key. A session cookie is then formed by concatenating the length of the secret, the length of the secret, the secret itself, and the encoded and encrypted configuration data. The session cookie is transmitted from a server computer to a client computer, where it is stored. ~~Each time the client computer begins a new communications session with the server computer that generated the session cookie, the session cookie is transmitted from the client computer to the server computer. The server computer receives the session cookie from the client computer and extracts the secret stored in the session cookie. The server computer then creates the modified encryption key by inserting the secret into the standard encryption key at the predefined location. The server computer then utilizes the modified encryption key to decrypt the encoded session data stored in the session cookie. Once the encoded session data has been decrypted, the server computer decodes the tags contained in the encoded session data. For each tag, the server computer determines whether the tag is recognized as a valid tag. If the tag is a valid tag, the server computer utilizes the value associated with the tag to configure itself. If the tag is not a valid tag, the server computer ignores the tag and attempts to decode the next tag. The server computer continues decoding tags until no tags remain to be decoded. A new session cookie may be created and transmitted to the client computer. Periodically, the server computer may request the new session cookie from the client computer to determine if the communications session between the client computer and the server computer is still active. If no response or an invalid session cookie is received, the communications session between the client and server computers is terminated.~~

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